

mixture of one or more enzymatic nucleic acid reagents or products, comprising the steps of:

- screening the medium with a screening means comprising a multisensor array so that more than one physico-chemical change of a gas or vapor phase of a nucleic acid can be detected by the multisensor, thereby providing information to produce at least one signal output;
- transferring the signal output to a signal processing means responsive to differences in electromagnetic properties of the signal for generating a final output;
- receiving the final output into a pattern recognition means sufficient to generate a measurement pattern of the information;
- sorting the information in accordance with a set of class boundaries of the physico-chemical changes; and
- monitoring sorted information representative of the identity and amount of a nucleic acid in the medium.

4. (Amended) The method according to claim 1, wherein the multisensor array comprises a semiconductor gas sensor.

5. (Amended) The method according to claim 1, wherein the multisensor array comprises at least one of a doped metal oxide gas sensor or an undoped metal oxide gas sensor.

6. (Amended) The method according to claim 1, wherein the multisensor array comprises at least one conductive polymer sensor.

7. (Amended) The method according to claim 1, wherein the multisensor array is at least one of a vibrating or resonant micromechanical device.

8. (Amended) The method according to claim 7, wherein the multisensor array has a coating.

9. (Amended) The method according to claim 1, wherein the multisensor array is a mass spectrometer.

10. (Amended) The method according to claim 1, wherein the multisensor array comprises an optical sensing probe.

11. (Amended) The method according to claim 1, wherein the multisensor array comprises an optical fiber.

12. (Amended) The method according to claim 1, wherein the information comprises at least one of odorous or volatile chemical species characteristics of the presence of a nucleic acid.

13. (Amended) The method according to claim 1, wherein at least part of the information detected by the multisensor array is changes in the concentration of a nucleic acid.

14. (Twice amended) The method according to claim 1, wherein at least part of the information detected by the multisensor array is changes in the at least one secondary product of the reaction.

15. (Amended) The method according to claim 1, wherein at least part of the information detected by the multisensor array is changes in a radiative property of the electromagnetic spectrum of a nucleic acid.

16. (Amended) The method according to claim 1, wherein at least part of the information detected by the multisensor array is changes in a non-radiative property of the electromagnetic spectrum of a nucleic acid.

17. (Amended) The method according to claim 1, wherein at least part of the information detected by the multisensor array is changes in a non-radiative property of the electromagnetic spectrum of a secondary product of the reaction.

37. (Amended) The method of claim 1 wherein said screening step further comprises reacting one or more volatile organic tags with the medium to attach to said nucleic acid.